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NPIC/R-856/64

September 1964



TCS-7887/64
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2 Pages

HF COMMUNICATIONS FACILITY
TYUMEN ICBM COMPLEX, USSR



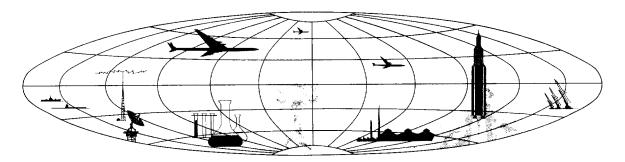


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TALENT-KEYHOLE Control System Only

25X1D

25X1D'

TCS-7887/64

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Title: HF Communications Facility,	Geo Coords:	COMOR No:	Publication No:
	56-53- N 65-49-	E None	NPIC/R-856/64
Tyumen ICBM Complex, USSR	NPIC Target No:	BE No:	Date:
	None	None	September 1964

Photo Data: 25X1D

(TS RUFF)

References: USATC, Series 200, Sheet 0156-20HL, 2d ed, Apr 63 (SECRET) NPIC Project N-843/64 (NSA/P0432/R87-64)

A high-frequency (HF) communications facility, situated 2 nm west of Bogandinskaya near the Tyumen ICBM Complex support facility, contains two HF half-wave single-bay fishbone receiving antennas (apparently 2-2-2 configuration), a single HF horizontal dipole antenna, and an unidentified possible antenna (Figure 1). These antennas are in cleared areas

25X1D 25X1D

25X1D

No control

building can be seen, but the logical area for its probable future location appears to be recently cleared.

There is no indication of activity in the area on

The earliest definite evidence of this facility occurs on photography of 25X1D which clearings for the antennas can be seen.

earlier photography. 3/4/

Frequency calculations, based on observable measurements (Table 1) and on assumed inherent antenna characteristics, 5/ indicate both fishbone antennas have a broadband capability with a useful range from 3 to 13 megacycles (mc). Because of photographic limitations, the frequency range of the horizontal dipole can only be approximated; however, assuming the antenna to have a center-fed arrangement, its measurements indicate a fundamental frequency of 3.5 mc. As such, it could be parallel tuned to operate multiband at 3.5, 7, 14, and 28 mc. This range amply covers the frequencies used for both day and night operations.

Table 1. Selected Data

Antenna Type	Length (feet between end poles ±5)	Width (feet between side poles ±5)	Probable Frequency (mc)
Fishbone (2) Horizontal dipole	315 130	195 	3-13 3.5 (fundamental) 7, 14, and 28

ADDITIONAL REFERENCES

1. NPIC. R-842/64, ICBM Complex, Tyumen, USSR, Sep 64 (TOP SECRET RUFF)

25X1D

25X1D

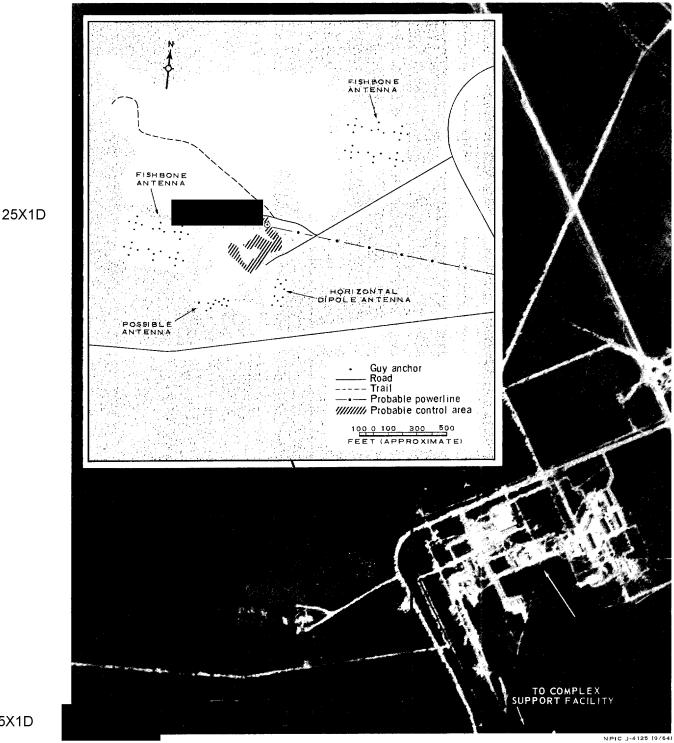


5. Laport, Radio Antenna Engineering, p 340, New York, McGraw Hill, 1952 (UNCLASSIFIED)

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25X1D

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FIGURE 1. HF COMMUNICATIONS FACILITY, TYUMEN ICBM COMPLEX.

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